LPDES PERMIT NO. LA0029769, AI No. 2425

LPDES FACT SHEET and RATIONALE
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

I. **Company/Facility Name:** Mosaic Fertilizer, LLC
Faustina Plant
9959 LA Hwy 18
St. James, Louisiana 70086

II. **Issuing Office:** Louisiana Department of Environmental Quality
(LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

III. **Prepared By:** Bruce Fielding
Industrial Permits Section
Water Permits Division
Phone #: 225-219-3006
E-mail: bruce.fielding@la.gov

Date Prepared: January 19, 2010

IV. **Permit Action/Status:**

A. Reason For Permit Action:

Proposed reissuance of an expired Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.2301.F, 4901, and 4903.

B. LPDES permit - LPDES permit effective date: June 1, 2004
LPDES permit expiration date: May 31, 2009
EPA has not retained enforcement authority.

C. Application received on December 3, 2008, and addendum received on March 6, 2009. Additional information received in an email from Mosaic (Chatelain) to LDEQ (Fielding) 2/23/2010.

V. Facility Information:

A. Location - 9959 LA Hwy 18 in St. James, St. James Parish

B. Applicant Activity - According to the application, Mosaic Fertilizer, LLC, Faustina Plant, is a phosphatic and nitrogenous fertilizer manufacturing facility. Products manufactured onsite include Ammonia, Diammonium Phosphate (DAP), and Monoammonium Phosphate (MAP). Phosphoric acid is provided by Mosaic's Uncle Sam facility.

C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401-402, and 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903)

Guideline	Reference
Phosphate Subcategory (BPJ)	40 CFR 418.A
Ammonia Subcategory	40 CFR 418.B

Other sources of technology based limits:
LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).
Louisiana Water Quality Management Plan for Sanitary Dischargers.
LDEQ Sanitary General Permits
Best Professional Judgement (BPJ)
Previously effective LPDES permit

D. Fee Rate -
1. Fee Rating Facility Type: Major
2. Complexity Type: VI
3. Wastewater Type: II
4. SIC code: 2874, 2873

E. Continuous Facility Effluent Flow (Max 30-Day) - 11.92 MGD.

VI. Receiving Waters:

Mississippi River (Final Outfalls 001 and 002)

1. TSS (15%), mg/L: 32
2. Average Hardness, mg/L $CaCO_3$: 153.4
3. Critical Flow, cfs: 141,955
4. Mixing Zone Fraction: 1/3
5. Harmonic Mean Flow, cfs: 366,748

6. River Basin: Mississippi River Basin (Final Outfalls 001 and 002), Subsegment 070301.
7. Designated Uses:
   The designated uses are primary contact recreation, secondary contact recreation, fish and wildlife propagation, and drinking water supply.

Bayou Verret (Final Outfalls 006, 007, 008, and 009)

1. River Basin: Barataria Basin (Final Outfalls 006, 007, 008, 009), Subsegment No. 020101
2. Designated Uses:
   The designated uses are primary contact recreation, secondary contact recreation, fish and wildlife propagation, and agriculture.

Information based on the following: LAC 33:IX Chapter 11;/Recommendation(s) from Todd Franklin, December 9, 2009. Hardness and 15% TSS data come from monitoring station 0319 on the Mississippi River listed in Hardness and TSS Data for All LDEQ Ambient Stations for the Period of Record as of March 1998, LeBlanc. See Appendix C.

VII. Outfall Information:

Final Outfall 001

A. Type of wastewater - combined flow of river return water and effluent from Internal Outfalls 101, 201, 301, and 501.

B. Location - at the point of discharge directly downstream from Internal Outfall 501 on the primary effluent header at Latitude 30°05'15", Longitude 90°54'45".

C. Treatment - none; there is no direct treatment at this outfall. The waste streams are treated before discharge to Final Outfall 001.

D. Flow - Continuous, (Long Term Average [LTA]) 7.8 MGD

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin Subsegment 070301

Internal Outfall 101

A. Type of wastewater - Treated process wastewater consisting of double lime treated active calcium sulfate storage pile and contaminated phosphate fertilizer area wastewater and low

contamination potential stormwater runoff including but not limited to the stormwater runoff from the sulphur prilling process area (routed from Outfall 006).

B. Location - at the point of discharge from the double lime treatment system at Latitude 30°04'56", Longitude 90°55'01".

C. Treatment - double lime treatment, neutralization, and chemical precipitation

D. Flow - Intermittent, (LTA) 1.34 MGD

E. Receiving waters - Mississippi River via Final Outfall 001

F. Basin and segment - Mississippi River Basin, Subsegment 070301

Internal Outfall 201

A. Type of wastewater - river water clarifier underflow

B. Location - at the point of discharge from the clarifier at Latitude 30°04'58", Longitude 90°55'06".

C. Treatment - none

D. Flow - Continuous, (LTA) 0.615 MGD

E. Receiving waters - Mississippi River via Final Outfall 001

F. Basin and segment - Mississippi River Basin, Subsegment 070301

Internal Outfall 301

A. Type of wastewater - process wastewater from phosphate fertilizer areas, non-process wastewater coming into incidental contact with process materials, process wastewater from nitrogen fertilizer area, contaminated wastewater from raw material handling and storage areas, contaminated wastewater from product storage and handling areas, non-process wastewater from utility areas and maintenance areas, cooling tower blowdown, demineralizer regeneration, sand filter backwash, boiler blowdown, miscellaneous seals and flushes, condensate dump, lab water discharges, stormwater associated with industrial and construction activities, water from safety showers and safety equipment, wash down water, sanitary wastewater (when not routed to Internal Outfall 501), and non-contact cooling water

B. Location - at the point of discharge from the final retention pond at Latitude 30°04'55", Longitude 90°54'14".

C. Treatment - settling

D. Flow - Continuous, (LTA) 1.98 MGD

E. Receiving waters - Mississippi River via Final Outfall 001

F. Basin and segment - Mississippi River Basin, Subsegment 070301

Internal Outfall 501

A. Type of wastewater - treated sanitary wastewaters

B. Location - at the point of discharge from the nitrogen area, administration, and maintenance area treatment plant at Latitude 30°05'07", Longitude 90°54'58".

C. Treatment - package sewage treatment plant

D. Flow - Continuous, (LTA) 0.0698 MGD.

E. Receiving waters - Mississippi River via Final Outfall 001

F. Basin and segment - Mississippi River Basin, Subsegment 070301

Final Outfall 002

A. Type of wastewater - stormwater runoff related to inactive calcium sulfate storage pile water.

B. Location - at the point of discharge from the inactive calcium sulfate storage pile impoundment at Latitude 30°05'24", Longitude 90°54'45".

C. Treatment - None

D. Flow - Intermittent, (LTA) 1.31 MGD

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Subsegment 070301

Final Outfall 006

A. Type of wastewater - low contamination potential stormwater runoff including, but not limited to, stormwater runoff from the sulfur prilling process area (*1).

B. Location - at the point of discharge north of the gypsum stacks at Latitude 30°04'18", Longitude 90°57'10".

C. Treatment - None

D. Flow - Intermittent, (LTA) 2.2 MGD

E. Receiving waters - Bayou Verret

F. Basin and segment - Barataria Basin, Subsegment 020101

(*1) Description maintained from the previously issued LPDES permit in lieu of Form 2C due to comments made about this outfall in the cover letter of the application and in-house comments with the facility on 1/19/2010.

Final Outfall 007

A. Type of wastewater - non-contaminated stormwater runoff.

B. Location - at the point of discharge from the north side of the railroad between the two sets of gypsum stacks at Latitude 30°03'52", Longitude 90°56'54".

C. Treatment - None

D. Flow - Intermittent, (LTA) 0.32 MGD

E. Receiving waters - Bayou Verret

F. Basin and segment - Barataria Basin, Subsegment 020101

Final Outfall 008

A. Type of wastewater - non-contaminated stormwater runoff.

B. Location - at the point of discharge from the south side of the railroad between the two sets of gypsum stacks at Latitude 30°03'43", Longitude 90°56'35".

C. Treatment - None

D. Flow - Intermittent, (LTA) 0.43 MGD

E. Receiving waters - Bayou Verret

F. Basin and segment - Barataria Basin, Subsegment 020101

Final Outfall 009

A. Type of wastewater - non-contaminated stormwater runoff.

B. Location - at the point of discharge south of the facility and gypsum stacks at Latitude 30°03'07", Longitude 90°55'57".

C. Treatment - none

D. Flow - Intermittent, (LTA) 1.49 MGD.

E. Receiving waters - Bayou Verret

F. Basin and segment - Barataria Basin, Subsegment 020101

VIII. Proposed Permit Limits:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

Summary of Proposed Changes From the Current LPDES Permit:

A. Final Outfall 001 - Whole Effluent Toxicity Testing limits were replaced with reporting requirements. No toxicity failures occurred within the last five years and a reasonable potential calculation demonstrated that there wasn't a reasonable potential for toxicity. See Appendix D for more information.

B. Final Outfall 006 - Facility requested changes in the sampling location for TSS. However, in an in-house conversation with the facility on 1/19/2010, it was agreed by LDEQ (Fielding) and Mosaic (Chatelain) that this would be addressed by a comment during the comment period if needed. This draft permit would contain conditions identical to the previously issued permit.

C. Internal Outfalls 401, 601, and 131 have been removed. These have all been consolidated at Internal Outfall 501

D. Internal Outfall 501 - Statistical basis for all parameters at Internal Outfall 501 have been changed from Weekly Average to Daily Maximum. This is consistent with current Office guidance for sanitary dischargers at industrial facilities.

IX. Permit Limit Rationale:

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgement) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII. Regulations also require permits to establish monitoring requirements to yield data representative of the monitored activity [LAC 33:IX.2715/40 CFR 122.48(b)] and to assure compliance with permit limitations [LAC 33:IX.2707.I./40 CFR 122.44(I)].

1. Final Outfall 001 - combined flow of river return water and effluent from Internal Outfalls 101, 201, 301, and 501

Mosaic Fertilizer, LLC, Faustina Plant, is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

Manufacturing Operation	Guideline
Fertilizer Manufacturing:	
Phosphate Subcategory	40 CFR 418 Subpart A
Ammonia Subcategory	40 CFR 418 Subpart B

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	Continuous
pH Range Excursions No. of Events >60 minutes	---	0 (*1)	---	---	Continuous
pH Range Excursions Monthly Total Accumulated Time in Minutes	---	446 (*1)	---	---	Continuous
pH (Standard Units)	---	---	Report (*1) (Min)	Report (*1) (Max)	Continuous
Temperature	Report	Report	---	---	Continuous
Total Phosphorous (as P)	---	---	35	105	3/week
Fluoride	---	---	25	75	3/week
Dock Discharges (as P)	Report	Report	---	---	1/month
Biomonitoring	---	---	Monthly Avg. Minimum Report	48-Hour Minimum Report	1/quarter, Both species

(*1) The pH shall be within the range of 6.0 - 9.0 standard units at all times subject to the continuous monitoring pH range excursion provisions following:

pH RANGE EXCURSION PROVISIONS

Where a permittee continuously measures the pH of wastewater as a requirement or option in a Louisiana Pollutant Discharge Elimination System (LPDES) permit, the permittee shall maintain the pH of such wastewater within the range set forth in the permit, except that excursions from the range are permitted, provided:

A. The total time during which the pH values are outside the required range of pH values shall not exceed 446 minutes in any calendar month; and

B. No individual excursion from the range of pH values shall exceed 60 minutes.

For the purposes of this section, an "excursion" is an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth in the permit.

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit effective on June 1, 2004. The continuous monitoring frequency has also been retained.

pH - this requirement has been established in accordance with LAC 33:IX.1113.C.1. and retained from the current LPDES permit effective on June 1, 2004. The continuous monitoring frequency has also been retained.

All other parameters, monitoring requirements and frequencies have been retained from the current LPDES permit effective on June 1, 2004.

Site-Specific Consideration(s)

None

2. Internal Outfall 101 - treated process wastewater consisting of double lime treated active calcium sulfate storage pile and contaminated phosphate fertilizer area wastewater and contaminated phosphate fertilizer area wastewater and low contamination potential stormwater runoff including but not limited to the stormwater runoff from the sulphur prilling process area (routed from Outfall 006)(*1).

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	Continuous
Total Phosphorous (as P) (*2)	---	---	35	105	3/week
Fluoride (*2)	---	---	25	75	3/week

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
COD (*3)	---	---	---	100	1/month
Oil and Grease (*3)	---	---	---	15	1/month
Ammonia (*3)	---	---	---	10	1/month
TSS (*3)	---	---	---	50	1/month
Total Sulfate	---	---	---	Report	1/month
pH Standard Units	---	---	Report (min)	Report (max)	Continuous

(*1) The facility is allowed to designate some of the gypsum stacks as inactive and the storm water collected may be discharged via Final Outfall 002. The guideline technology limitations will be applied to the storm water discharged from the active gypsum stacks based on BPJ and the previous LPDES permit.

(*2) Excess stormwater from the active calcium sulfate storage pile and associated active collection pond shall be treated and discharged at Internal Outfall 101. This excess water may be transferred to the inactive system only when the physical integrity of the active impoundment and/or leveee system is threatened by wet weather beyond the capacity of the recycle systems, including treatment, and the ability to discharge to the receiving stream.

(*3) COD, Oil and Grease, Ammonia (as N), TSS, and Total Sulfate must be sampled if at any time during the calendar month stormwater runoff from the sulphur prilling process area normally discharged via Final Outfall 006 is routed through the double lime treatment unit to Internal Outfall 101 subsequent to re-routing of the stream, and reported on the DMR for that reporting period.

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit effective on June 1, 2004. The continuous monitoring frequency has also been retained.

All other parameters, monitoring requirements and frequencies have been retained from the current LPDES permit effective on June 1, 2004.

3. Internal Outfall 201 - river water clarifier underflow.

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/week
Clarifying Agents	Report (*1)	Report (*1)	---	---	1/month

(*1) The quantity and types of coagulants (clarifying agents) used in the intake raw river water treatment clarification system during the sampling month shall be recorded. Records of the quantity and type of coagulants used shall be retained for three (3) years following Part III.C.3. No DMR reporting shall be required.

4. Internal Outfall 301 - process wastewater from phosphate fertilizer areas, non-process wastewater coming into incidental contact with process materials, process wastewater from nitrogen fertilizer area, contaminated wastewater from raw material handling and storage areas, contaminated wastewater from product storage and handling areas, non-process wastewater from utility areas and maintenance areas, cooling tower blowdown, demineralizer regeneration, sand filter backwash, boiler blowdown, miscellaneous seals and flushes, condensate dump, lab water discharges, stormwater associated with industrial and construction activities, water from safety showers and safety equipment, wash down water, sanitary wastewater (when not routed to Internal Outfall 501), and non-contact cooling water.

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	Continuous
Ammonia (as N)	1899	3841	---	---	3/week
Total Phosphorous (as P)	---	---	Report	Report	3/week
Fluoride	---	---	Report	Report	3/week

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit effective on June 1, 2004. The continuous monitoring frequency has also been retained.

Calculations for ammonia limits are documented in Appendix A. The remaining monitoring requirements and frequencies have been retained from the existing LPDES permit.

5. Internal Outfall 501 - Treated sanitary wastewaters

Sanitary wastewaters (internal or external) are regulated in accordance with LAC 33:IX.711 or 709.B, by BPJ utilizing the sanitary general permits issued by this Office, and the Louisiana Water Quality Management Plan, Areawide Sanitary Effluent Limits Policy and Statewide Sanitary Effluent Limits Policy, as applicable. Concentration limits are used in accordance with LAC 33:IX.2709.F.1.b which states that mass limitations are not necessary when applicable standards and limitations are expressed in other units of measurement. LAC 33:IX.709.B references LAC 33:IX.711 which express BOD_5 and TSS in terms of concentration. Sanitary general permits are issued in classes according to the maximum expected facility flow ("X" = Amount of Flow).

SANITARY CLASS II, 0.005 <= X <0.025 MGD

Also for use for Miss., Atchafalya, or Red River. For other receiving waters see AELP or GELP. According to the Statewide Sanitary Effluent Limitations Policy, these dischargers shall receive limitations equivalent to secondary treatment.

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/quarter
BOD_5	---	---	30	45	1/quarter
TSS	---	---	30	45	1/quarter
Fecal Coliform colonies/100ml	---	---	200	400	1/quarter
pH Standard Units	---	---	6.0 (min)	9.0 (max)	1/quarter

6. Final Outfall 002 -rainfall runoff related to inactive calcium sulfate storage pile water.

The inactive calcium sulfate storage pile concept was created to relieve the company of the obligation to recycle all process-related wastewater from the relatively large calcium sulfate piles and impoundment. The company has the incentive to capture all possible P_2O_5 from the calcium sulfate piles and there is a total phosphorous water quality standard effluent limitation for the facility which maintains the phosphorous content of the effluent at levels that prevent algae blooms or other forms of eutrophication. This limit is established in Part II of the permit and is based on actual river flow.

Inactive Calcium Sulfate Storage Pile Excess Stormwater Runoff

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	Continuous
Flow, weekly max - MGD	Report	Report	---	---	1/month
Total Fluoride	Report	Report	Report	Report	3/week
Total Phosphorous (as P)	Report	Report	Report	Report	3/week
Calculated total phosphorous limit based on river flow	(*1)	(*1)	Report	Report	3/week
Total Phosphorous Exceedances	---	---	Report	0 (days)	3/week
TSS	Report	Report	Report	Report	1/month
Total Sulfate	Report	Report	Report	Report	3/week
Total Radium 226 (*2)	Report	Report	0.4 pCi/ml	0.5 pCi/ml	1/month
Total Uranium	Report	Report	Report	Report	1/week
Gross Alpha Particle Activity (*2)	Report	Report	Report	Report	1/month
Toxic Priority Metals (*3)	Report	Report	Report	Report	1/month

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Total Aluminum	Report	Report	Report	Report	1/week
Total Cadmium	Report	Report	Report	Report	1/month
Stream Flow (cfs) (*4)	---	---	---	Report	1/day
pH Standard Units	---	---	Report (min)	Report (max)	Continuous
Biomonitoring	---	---	Monthly Avg. Minimum Report	48-Hour Minimum Report	1/quarter

(*1) The daily maximum mass limits vary with the Mississippi River flow and are defined in Part II of the permit.

(*2) Mass units of pico-curies/day and concentration units of pico-curies/milliliter

(*3) Toxic Priority Metals consist of the total form of antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.

(*4) Mississippi River flow will be obtained from the U.S. Army Corps of Engineers in New Orleans for the Tarbert's Landing gauge near the Old River Diversion Control Structure. The flow for every day of the month shall be reported and attached to the monthly Discharge Monitoring Report (DMR). The minimum flow shall be reported on the DMR.

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit effective on June 1, 2004. The continuous monitoring frequency has also been retained.

pH - this requirement has been established in accordance with LAC 33:IX.1113.C.1. and retained from the current LPDES permit effective on June 1, 2004. The continuous monitoring frequency has also been retained.

All other parameters and associated monitoring frequencies shall be retained from the current LPDES permit effective June 1, 2004.

7. Final Outfall 006 - low contamination potential stormwater runoff, including but not limited to stormwater runoff from the sulfur prilling process area

Uncontaminated or low potential contaminated stormwater discharged through discrete outfall(s) not associated with process wastewater shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).

STORMWATER

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY (*1)
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/week
Chemical Oxygen Demand (COD)	---	---	---	100	1/month
Oil & Grease	---	---	---	15	1/month
Ammonia (as N)	---	---	---	10	1/month
Total Suspended Solids	---	---	--	50	1/month
Total Sulfates	---	---	---	Report	1/month
pH Standard Units	---	---	6.0 (min)	9.0 (max)	1/month

(*1) When discharging.

Total Ammonia monitoring with a 1/quarter monitoring frequency was maintained at this outfall from the previous permit. See Section IX.C of this factsheet.

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit effective on June 1, 2004. The continuous monitoring frequency has also been retained.

pH - this requirement has been established in accordance with LAC 33:IX.1113.C.1. and retained from the current LPDES permit effective on June 1, 2004. The continuous monitoring frequency has also been retained.

All other parameters and associated monitoring frequencies shall be retained from the current LPDES permit effective June 1, 2004.

In accordance with LAC 33:IX.2707.I.3 and 4 [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. **For first time permit issuance**, the Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. **For renewal permit issuance**, the Part II condition requires that the Storm Water Pollution Prevention Plan (SWP3) be reviewed and updated, if necessary, within six (6) months of the effective date of the final permit. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2511.B.14 [40 CFR 122.26(b)(14)].

8. Final Outfalls 007, 008, and 009 - Stormwater

Final Outfall 007 - non-contaminated stormwater runoff

Final Outfall 008 - non-contaminated stormwater runoff

Final Outfall 009 - non-contaminated stormwater runoff

Uncontaminated or low potential contaminated stormwater discharged through discrete outfall(s) not associated with process wastewater shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).

STORMWATER

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY (*1)
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/week
Chemical Oxygen Demand (COD)	---	---	---	100	1/month
Oil & Grease	---	---	---	15	1/month
Ammonia (as N)	---	---	---	10	1/month
pH Standard Units	---	---	6.0 (min)	9.0 (max)	1/month

(*1) When discharging.

Total Ammonia monitoring with a 1/month monitoring frequency was maintained at these outfalls from the previous permit. See Section IX.C of this factsheet.

In accordance with LAC 33:IX.2707.I.3 and 4 [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. **For first time permit issuance,** the Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. **For renewal permit issuance,** the Part II condition requires that the Storm Water Pollution Prevention Plan (SWP3) be reviewed and updated, if necessary, within six (6) months of the effective date of the final permit. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2511.B.14 [40 CFR 122.26(b)(14)].

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, October 7, 2009. Calculations, results, and documentation are given in Appendix B.

In accordance with 40 CFR § 122.44 (d)(1)/LAC 33:IX.2707.D.1, the existing (or potential) discharge (s) was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, October 7, 2009, to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix B.

The following pollutants received water quality based effluent limits:

POLLUTANT(S)
Total Phosphorous

PHOSPHOROUS LIMITS FOR FINAL OUTFALL 002

The daily maximum total phosphorous [*1] in pounds per day discharged through Final Outfall 002 is based on the flow of the Mississippi River and shall not exceed the values calculated as follows:

1. For Mississippi River flows below 200,000 cfs:
   Total phosphorous = 0.4(0.955602*Q - 105,300)
2. For Mississippi River flows equal to or greater than 200,000 cfs and less than 300,000 cfs:
   Total phosphorous = 0.4(0.955602*Q - 127,700)
3. For Mississippi River flows equal to or greater than 300,000 cfs and less than 400,000 cfs:
   Total phosphorous = 1/3(0.955602*Q - 127,700)
4. For Mississippi River flows equal to or greater than 400,000 cfs:
   Total phosphorous = 0.3(0.955602*Q - 127,700)

Where Q = Mississippi River flow in cfs.

[*1] The relationship between the Phosphorous TMDL and River Flow (Q) is based on the report "Evaluation and Projection of Water Quality Impacts from Nutrient Loading" (Figure 30 p. 48) published by the Department of Environmental Quality. The original formula established by the report is as follows:

Phosphorous TMDL(lbs/day) = 0.955602 x Q(cfs) - 2.691175E-04

Since the constant term, (2.691175E-04 = 0.0002691175) is numerically insignificant, it is not considered in the formula used to assign permit limits.

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, October 7, 2009. They are also listed in Part II of the permit.

Site-Specific Consideration(s) Related to Water Quality in the Mississippi River Basin for Outfalls 001 and 002

The LDEQ is aware of the occurrence of a low oxygen hypoxic or "dead zone" in the Gulf of Mexico and its relationship to nutrients and fresh water from the Mississippi River and has developed a criteria development plan for state waters in coordination with EPA to create defensible nutrient criteria based on the best available science. Work on criteria for the Mississippi River is an ongoing effort and will require further scientific investigation because of the complex nature of the large Mississippi River watershed which includes over 30 states and two Canadian Provinces. A reopener clause has been established in the permit in accordance with LAC 33:IX.2903 which allows LDEQ

to modify, or alternatively, revoke and reissue the permit to comply with any more stringent nutrient limitations or requirements that are promulgated in the future.

TMDL Waterbodies

Subsegment No. 070301 of the Mississippi River Basin is not listed on LDEQ's 2006 Final Integrated 303(d) List as being impaired.

Subsegment No. 020101 of the Barataria Basin is not listed on LDEQ's 2006 Final Integrated 303(d) List as impaired since the all of the Total Maximum Daily Loading (TMDL) assessments have been completed for this subsegment. The pollutants of concern were Organic Enrichment/low Dissolved Oxygen (DO), Nitrate/Nitrite, and Phosphorus. These pollutants have been addressed in the Bayou Verret, Bayou Chevreuil, Bayou Citamon, and Grand Bayou TMDL for Biochemical Oxygen-Demanding Substances which was finalized on July 30, 2004. Based on this TMDL assessment, the point source dischargers within this watershed were considered to have very little or no impact on the modeled waterbody; therefore, they were not included in the model and are not subject to any reductions based on this TMDL. The TMDL assessment further indicated that these facilities are permitted in accordance with state regulation and policies that provide adequate protective controls. The TMDL assessment indicated that new similarly insignificant point sources will continue to be issued permits in this manner. Therefore, since this facility discharges non-process area stormwater to this subsegment and was not included in the list of point source discharges in this TMDL, the limit for COD will be retained in the permit. Generally, in regard to Nutrients (Nitrate/Nitrite and Phosphorus), LDEQ has determined that Organic Enrichment/low DO directly correlates with overall nutrient impact. Thus, when Organic Enrichment/DO is limited, the LDEQ is in effect also limiting and controlling nutrient concentrations and impacts. However, since the permittee operates a fertilizer facility which is known to handle constituents that could have an impact on Nutrients, the limit for Ammonia will be continued in the permit.

A reopener clause will be placed in Part II of the permit to allow for more stringent or additional limitations or requirements to be placed in the permit, if needed, as a result of any modifications to the TMDLs.

D. Biomonitoring Requirements

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall(s) 001 are as follows:

TOXICITY TESTS	FREQUENCY
Acute static renewal 48-hour definitive toxicity test using Daphnia pulex	1/quarter
Acute static renewal 48-hour definitive toxicity test using fathead minnow (Pimephales promelas)	1/quarter

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to the Office of Environmental Compliance. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 0.16%, 0.22%, 0.29%, 0.39%, and 0.52%. The low-flow effluent concentration (critical dilution) is defined as 0.39% effluent. See Appendix C.

X. Compliance History/DMR Review:

A. LDEQ records were reviewed for the period of December 2007 through December 2009. There were no enforcement actions issued to this facility for any media during this time period.

B. A DMR review of the monitoring reports covering the monitoring period of Decmber 2007 through December 2009 revealed the following effluent excursion:

DATE	PARAMETER	OUTFALL	REPORTED VALUE		PERMIT LIMITS	
			MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
05/08	Ammonia Nitrogen (as N)	006	---	28.7 mg/L	---	10 mg/L

C. The most recent inspection was conducted on July 17, 2008. There were no areas of concern noted in the inspection report.

XI. "IT" Questions - Applicant's Responses

This applicant is not required to submit "IT" Questions in accordance with La. R.S. 30:2018(A). However, the permittee has provided "IT" Questions as part of the application submittal dated December 3, 2008. See Appendix B.

XII. Endangered Species:

The receiving waterbody, Subsegment 070301 of the Mississippi River Basin (Final Outfalls 001 and 002), has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the Pallid Sturgeon, which is listed as a threatened and/or endangered species. LDEQ has submitted this draft permit to the FWS for review in accordance with a letter dated 01/11/10 from Rieck (FWS) to Nolan (LDEQ). As set forth in the Memorandum of Understanding between the LDEQ and the FWS, and based on information provided by the FWS,

LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse effect upon the Pallid Sturgeon. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

The receiving waterbody, Subsegment 020101 of the Barataria Basin (Final Outfalls 006, 007, 008, and 009) is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated January 11, 2010 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

XIII. Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XIV. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in the application.

XV. Variances:

No requests for variances have been received by this Office.

XVI. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List